Claims

1. A method of operating a mobile communication device, comprising the steps of:

transmitting over-the-air that a virtual bearer mode of operation is supported;

receiving a response; and

selectively operating in a virtual bearer mode depending upon the response.

2. The method according to claim 1, wherein the mobile device includes a first controller maintaining the integrity of the radio link and a second controller converting between over-the-air and internal forms, and wherein said step of selectively operating includes communicating between the first controller and the second controller via a virtual bearer in the virtual mode and communicating between the first controller and the second controller independently of the virtual bearer in a transparent mode.

3. The method according to claim 1, wherein the virtual bearer mode is initiated in response to a response indicating a streaming bearer will be

4. A mobile communication device, comprising:

a radio link controller coupled to lower layers;

a virtual bearer including a buffer storing at least one logical link controller frame of a communication signal; and

a logical link controller coupled to the virtual bearer for receiving logical link controller frames from the logical link controller;

wherein the virtual bearer is operative to apply flow control to the lower layers in order to maintain a predetermined queue state target.

5. A mobile communication device, comprising:

a radio link controller coupled to lower layers;

a virtual bearer including a buffer storing at least one logical link controller frame of a communication signal; and

a logical link controller coupled to the virtual bearer for receiving logical link controller frames there from;

wherein the virtual bearer is operative to apply flow control to the lower layers and is responsive to a determination that a cell change is imminent.

6. The mobile communication device as defined in claim 5, wherein the determination is received from a network.

7. The mobile communication device as defined in claim 5, wherein the determination is made by the mobile.

8. The mobile communication device as defined in claim 7, wherein the determination is made using a predictive algorithm.

9. A method of operating a communication system including a network element, comprising the steps of:

determining that a virtual bearer is required on the downlink; and

transmitting the virtual bearer type.

10. The method of claim 9, wherein the step of transmitting includes transmitting an indication of a streaming bearer type for streaming data.

11. The method of claim 9, wherein the step of transmitting includes transmitting an indication of background bearer type for background data transmission.

12. The method of claim 9, wherein the step of transmitting includes transmitting an indication of no virtual bearer for interactive data.

13. The method of claim 10, further including the step of over-dimensioning the downlink signal to accommodate cell change by the mobile during a streaming bearer type of virtual bearer mode of operation.

14. A method of operating a communication system including a network element, comprising the steps of:

determining that a virtual bearer is required on the downlink; and

over-dimensioning the downlink signal to accommodate a cell change by the mobile during a virtual bearer mode of operation.

15. The method of claim 14, further including the step of not over-dimensioning the downlink signal to accommodate a cell change by the mobile during a background bearer type of virtual bearer mode operation.

16. A method of operating a mobile communication device, comprising:

storing at least one frame of a communication signal received from a network; and

applying flow control to the lower layers in a virtual bearer responsive to a determination that a cell change is imminent.

17. A method of operating a mobile communication device, comprising:

receiving a downlink streaming signal at a first data rate; and

outputting the signal at a slower rate during at least a portion of the transmission.